HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, Colorado 80527-2400

PATENT APPLICATION

ATTORNEY DOCKET NO. 200209677-1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Elias Gedamu **Confirmation No.:**

Application No.: **Examiner:**

Filing Date: 1/15/2004 **Group Art Unit:**

Title: OPTIMAL OPERATIONAL VOLTAGE IDENTIFICATION FOR A PROCESSOR DESIGN

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

This Information Disclosure Statement is submitted:

(X) under 37 CFR 1.97(b), or
(Within three months of filing national application; or date of entry of national application; or before mailing date of first office action on the merits; whichever occurs last)

( ) under 37 CFR 1.97(c) together with either a:
( ) Statement under 37 CFR 1.97(e), or
( ) a $180.00 fee under 37 CFR 1.17(p), or
(After the CFR 1.97 (b) time period, but before final action or notice of allowance, whichever occurs first)

( ) under 37 CFR 1.97 (d) together with a:
( ) Statement under 37 CFR 1.97(e)(1) or (2), and
( ) a $180.00 fee set forth in 37 CFR 1.17(p).
(Filed after final action, a notice of allowance, on or before payment of the issue fee)

Please charge to Deposit Account **08-2025** the sum of $0.00 . At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account **08-2025** pursuant to 37 CFR 1.25.

(X) Applicant(s) submit herewith Form PTO 1449 - Information Disclosure Statement together with any required copies of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

( ) A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO Form 1449, as presently understood by the individuals(s) designated in 37 CFR 1.56 (c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on form PTO 1449 and is enclosed herewith.

It is requested that the information disclosed herein be made of record in this application.

"Express Mail" label no. **EV269329851US**

Date of Deposit **1/15/2004**

I hereby certify that this is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to: Commissioner for Patents, Alexandria, VA 22313-1450.

By Rhonda Zaffino

Typed Name: **Rhonda Zaffino**

Respectfully submitted,

Elias Gedamu

By

Adam E. Crall

Attorney/Agent for Applicant(s)
Reg. No. **46,646**

Date: **1/15/2004**

Telephone No.: **770-933-9500**

FORM PTO-1449 LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	ATTY. DOCKET NO. 200209677-1	APPLICATION NO.	CONFIRMATION NO.
	APPLICANT Elias Gedamu		
	FILING DATE 1/15/2004	GROUP	

REFERENCE DESIGNATION **U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
	1A	6,571,359	5/27/2003	Padwekar et al.	
	1B	6,523,151	2/18/2003	Hekmatpour	
	1C	6,484,275	11/19/2002	Josephson et al.	
	1D	6,430,705	8/6/2002	Wisor et al.	
	1E	6,427,224	7/30/2002	Devins et al.	
	1F	6,427,216	7/30/2002	El-Kik et al.	
	1G	6,385,740	5/7/2002	Treadway et al.	
	1H	6,385,552	5/7/2002	Snyder	
	1I	6,370,658	4/9/2002	Jeong	
	1J	6,363,509	3/26/2002	Parulkar et al.	
	1K	6,285,974	9/4/2001	Mandyam et al.	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
	1L					
	1M					
	1N					
	1O					
	1P					

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

	1Q	Chen, Li and Sujit Dey, "Software-Based Self-Testing Methodology for Processor Cores," IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, Vol. 20, No. 3, March 2001 (pages 369-380).
	1R	Chen, Li, Sujit Dey, Pablo Sanchez, Krishna Sekar, and Ying Chen, "Embedded Hardware and Software Self-Testing Methodologies for Processor Cores," Los Angeles, CA, 2000 (6 pages).
	1S	Geotest, "Dynamic Testing of Micro-Processor Based Products," Santa Ana, CA (4 pages).

EXAMINER	DATE CONSIDERED

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EXAMINER INITIAL		DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
	2A	6,212,667	4/3/2001	Geer et al.	
	2B	6,181,004	1/30/2001	Koontz et al.	
	2C	6,064,948	5/16/2000	West et al.	
	2D	6,055,649	4/25/2000	Deao et al.	
	2E	6,042,384	3/28/2000	Loiacono	
	2F	6,031,992	2/29/2000	Cmelik et al.	
	2G	6,028,983	2/22/2000	Jaber	
	2H	5,928,334	7/27/1999	Mandyam et al.	
	2I	5,884,023	3/16/1999	Swoboda et al.	
	2J	5,867,719	2/2/1999	Harris, II et al.	
	2K	5,862,366	1/19/1999	Schmidt et al.	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
	2L					
	2M					
	2N					
	2O					
	2P					

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

	2Q	Johnson, David J. C., "HP's Mako Processor," Fort Collins, CO, October 2001 (16 pages).
	2R	Kranitis, N., A. Paschalis, D. Gizopoulos, and Y. Zorian, "Effective Software Self-Test Methodology for Processor Cores" (6 pages).
	2S	Kranitis, N., G. Xenoulis, D. Gizopoulos, A. Paschalis, and Y. Zorian, "Low-Cost Software-Based Self-Testing of RISC Processor Cores," 2003 (6 pages).

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	3A	5,841,968	11/24/1998	Caldera et al.	
	3B	5,699,506	12/16/1997	Phillips et al.	
	3C	5,673,274	9/30/1997	Yoshida	
	3D	5,673,272	9/30/1997	Proskauer et al.	
	3E	5,671,531	9/30/1997	Mugiya	
	3F	5,654,972	8/5/1997	Kuroiwa et al.	
	3G	5,638,382	6/10/1997	Krick et al.	
	3H	5,623,499	4/22/1997	Ko et al.	
	3I	5,617,531	4/1/1997	Crouch et al.	
	3J	5,596,583	1/21/1997	Krenik et al.	
	3K	5,590,134	12/31/1996	Yin	

FOREIGN PATENT DOCUMENTS

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	3L					
	3M					
	3N					
	3O					
	3P					

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

	3Q	Lai, Wei-Cheng and Kwang-Ting Cheng, "Instruction-Level DFT for Testing Processor and IP Cores in System-on-a-Chip," Santa Barbara, CA, 2001 (6 pages).
	3R	Silas, Isic, Igor Frumkin, Eilon Hazan, Ehud Mor, and Genadiy Zobin, "System-Level Validation of the Intel Pentium M Processor," Intel Technology Journal, Vol. 7, Issue 02, May 2003 (pages 37-43).
	3S	Singh, Virendra, Michiko Inoue, Kewal K. Saluja, and Hideo Fujiwara, "Software-Based Delay Fault Testing of Processor Cores" (10 pages).

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	4A	5,590,134	12/31/1996	Yin	
	4B	5,581,491	12/3/1996	Biwer et al.	
	4C	5,566,344	10/15/1996	Hall et al.	
	4D	5,487,169	1/23/1996	Vraney et al.	
	4E	5,444,716	8/22/1995	Jarwala et al.	
	4F	5,359,547	10/25/1994	Cummins et al.	
	4G	5,355,369	10/11/1994	Greenberger et al.	
	4H	5,233,612	8/3/1993	Huyskens et al.	
	4I	5,157,781	10/20/1992	Harwood et al.	
	4J	5,142,688	8/25/1992	Harwood, III	
	4K	5,128,737	7/7/1992	van der Have	

FOREIGN PATENT DOCUMENTS

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	4L					
	4M					
	4N					
	4O					
	4P					

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

	4Q	Ur, Shmuel and Yoav Yadin, "Coverage Driven Processor Test Generation: Proof of Concept," September 1997 (pages 1-16).
	4R	Kim, Hyungwon and John P. Hayes, "High-Coverage ATPG for Datapath Circuits with Unimplemented Blocks," Ann Arbor, MI (10 pages).
	4S	

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	5A	5,119,379	6/2/1992	Dara	
	5B	5,067,129	11/19/1991	Evans et al.	
	5C	5,021,997	6/4/1991	Archie et al.	
	5D	4,707,848	11/17/1987	Durston et al.	
	5E	4,520,440	5/28/1985	Buonomo et al.	
	5F				
	5G				
	5H				
	5I				
	5J				
	5K				

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